

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Shu KOBAYASHI *et al.*

Application No.: 10/589,259

Filed: August 11, 2006

For: ASYMMETRIC REACTION CATALYST
AND METHOD FOR PREPARING
OPTICALLY ACTIVE COMPOUND USING
THE SAME

Confirmation No.: 6807

Group Art Unit: Unassigned

Examiner: Unassigned

Commissioner for Patents

U.S. Patent and Trademark Office

Customer Window Mail Stop: ☐ New Application ☒ Amendment ☐ AF ☐ Issue Fee
Alexandria, VA 22314

Sir:

INFORMATION DISCLOSURE STATEMENT (IDS)

☒ **Under 37 C.F.R. § 1.97(b):** Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicant brings to the attention of the Examiner the documents listed on the attached PTO Form 1449. To the undersigned's knowledge, this IDS is being filed before the mailing date of a first Office Action on the merits, before the mailing date of a first Office Action on the merits after filing an RCE under § 1.114, or within three months of the application filing date.

☐ **Under 37 C.F.R. § 1.97(c):** Pursuant to 37 C.F.R. §§ 1.56 and 1.97(c), Applicant brings to the attention of the Examiner the documents listed on the attached PTO Form 1449. This IDS is being filed after the events recited in § 1.97(b) but, to the undersigned's knowledge, before the mailing date of a Final Office Action, a Notice of Allowance, or another action that closes prosecution in the application.

☐ The fee of \$180.00 set forth in § 1.17(p) is included herein; or

☐ Applicant submits that each item of information contained in this IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS.

☐ **Under 37 C.F.R. § 1.97(d):** Pursuant to 37 C.F.R. §§ 1.56 and 1.97(d), Applicant brings to the attention of the Examiner the documents listed on the attached PTO Form 1449. This IDS is being filed after the events recited in § 1.97(c) but before payment of the issue fee.

☐ The fee of \$180.00 set forth in § 1.17(p) is included herein; and

☐ Applicant submits that each item of information contained in this IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS.

☐ **Under 37 C.F.R. § 1.97(i):** Pursuant to 37 C.F.R. §§ 1.56 and 1.97(i), Applicant brings to the attention of the Examiner the documents listed on the attached PTO Form 1449. This IDS is being filed after the events recited in § 1.97(d). Applicant requests that the IDS be placed in the file.

☒ A Supplementary European search report or other listing of documents from a counterpart, related, or other application dated March 13, 2007 and having documents cited thereon is attached for the Examiner's consideration. Any of these documents not previously cited, and any additional documents are listed on the PTO Form 1449.

☒ Applicant respectfully requests that the Examiner consider the listed documents and evidence that consideration by making appropriate notations on the attached form. As for any document listed on the accompanying PTO-1449 that is in a language other than English, relevance can be understood from an enclosed English abstract or at least partial translation or from mention in the specification or in a search report for a corresponding application.

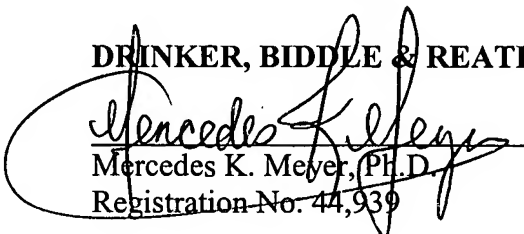
This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that any of the listed documents are material or constitute "prior art." If it should be determined that any of the listed documents do not constitute "prior art" under United States law, Applicant reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should any of the documents be applied against the claims of the present application.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this Application, including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required and including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573. This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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Dated: May 23, 2007

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INFORMATION DISCLOSURE CITATION				Attorney Docket No.: 47232-5012		Serial No.: 10/589,259	
(Use several sheets if necessary)				Applicants Shu KOBAYASHI <i>et al.</i>		Page 1 of 1	
PTO Form 1449				Filing Date: August 11, 2006		Group Art Unit: Unassigned	
U.S. PATENT DOCUMENTS							
*Examiner Initial		Document Number	Date	Name	Class	Sub Class	Filing Date
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Sub Class	Translation YES NO
		2002-275112	Sept. 25, 2002	JP			Abstract
OTHER DOCUMENTS							
(Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.)							
		Supplementary European Search Report dated March 13, 2007 for European Patent No. 05720349.9, National Phase of PCT/JP2005/004077					
		DATABASE WPI Week 200281, Derwent Publications Ltd., XP002424390, AN 2002 746136, London, Great Britain					
		HARURO ISHITANI <i>et al.</i> , "Efficient Catalytic Enantioselective Mannich-tupe Reactions Using a Zirconium-Bis (binaphthol) Methane Complex", Tetrahedron Letters, 1999, pp. 2161-2164, No. 40, Pergamon Press, Oxford, England & New York					
		KEIJI MARUOKA <i>et al.</i> , "Chiral Helical Lewis Acids for Asymmetric Diels-Alder Catalysts", Journal of Organic Chemistry, 1993, pp. 2938-2939, Vol. 58, No. 11, XP-002422580, American Chemical Society, Columbus, Ohio					
		JOSHUA HOWARTH <i>et al.</i> , Lewis Acid Catalysis of the Diels-Alder Reaction Using Niobium and Tantalum Chlorides in the Presence of Coordinating Ligands", Molecules (On-Line), August 5, 2000, pp. 993-997, Vol. 5, XP-002424382					
		CARLOS KLEBER Z. ANDRADE <i>et al.</i> , "Niobium (V) Chloride-Mediated Allylation of Aldehydes. Scope and Stereoselectivity", Tetrahedron Letters, September 10, 2001, pp. 6473-6476, Vol. 42, No. 37, Pergamon Press, Oxford, England & New York					
		SHIGEKI MATSUNAGA <i>et al.</i> , "Catalytic Enantioselective meso-Epoxyde Ring Opening Reaction with Phenolic Oxygen Nucleophile Promoted by Gallium Hterobimetallic Multifunctional Complexes", Journal of the American Chemical Society, 2000, pp. 2252-2260, Vol. 122, No. 10, American Chemical Society, Easton, PA					
		SHU KOBAYASHI <i>et al.</i> , "A Novel Dinuclear Chiral Niobium Complex for Lewis Acid Catalyzed Enantioselective Reactions: Design of a Tridentate Ligand and Elucidation of the Catalyst Structure", Angewandte Chemie, International Edition, 2005, pp. 761-764, Vol. 44, No. 5, XP002424384					
Examiner					Date Considered		
Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							